

## *Extreme radiation and temperature resistant electronic amplifier*

*Market Sectors: Electronics, Space & Defence Industry*

*Type of Opportunity: Co-development and/or licensing*

**A novel MEMS (micro-electromechanical systems) based amplifier has been developed by scientists at Leiden University. The amplifier is free of semiconductor-based electronics and is therefore very suitable for use in extreme temperature and high ionizing radiation environments.**

Most amplifiers make use of semiconductor based electronics like transistors. These amplifiers do not function at very low or high temperatures and are sensitive for ionizing radiation. The novel MEMS amplifier does not have these drawbacks. Furthermore the MEMS amplifier can be operated with much lower input noise levels than the best semiconductor amplifiers making it very useful in low-level measurements.

### **Key Benefits**

- Radiation resistive
- Suited for use in High and Low temperature environments
- Ultra low noise
- Compatible to CMOS and bipolar technology, but not necessarily so

### **Applications**

- Voltage and/or power amplification
- Space industry
- Defence industry
- Scientific and Medical electronics

### **Stage of Development**

Proof of principle has been established

### **Patent status**

Granted patent by European Patent Office  
US application still pending



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